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EXAMINER
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HERNANDEZ, JOSIAH J

ART UNIT	PAPER NUMBER
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2626

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10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/676,273

**Applicant(s)**

LEVIN ET AL.

**Examiner**

Josiah Hernandez

**Art Unit**

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 07/25/2007 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6-11, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Chakraborty (US 6,529,641) and Conner et al (US 5,836,664).

As to claim 1, Tretiakoff discloses a method for the automated, audible recitation of text arranged in a sequence of one or more words and displayed on surface (see abstract) defining an area having a height dimension and character of said text (see paragraph [0030]) along each dimension, said method comprising: a first element capable of distinguishing individual words in said

sequence from an image of said surface (see paragraphs [0001], [0013], and [0031]); a second element capable of audibly reciting the words distinguished by said first element, in said sequence (see paragraph [0001]); and a third element capable of capturing an image of said surface such that all characters of said text within said area are captured simultaneously (see paragraphs [0001] and [00013]).

Tretiakoff does not disclose specifically a fourth element capable of automatically processing said captured image so as to correct, without user interaction, for at least one of: image skew; image distortion and image blur, where said processing facilitates automated character recognition of text in a captured said image. Chakraborty teaches a method for automatic deskewing a scanned text image (abstract lines 1-2). Conner teaches a method displaying images received (abstract lines 1-5) and automatic distortion mechanism (figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the automatic image correction as discloses by Chakraborty and Conner. Doing so would have facilitated a user of the system that has vision impairments and could not otherwise correct the image themselves. If this feature would not be added the system would prove futile to a visually handicapped user.

As to claim 11, Tretiakoff discloses a method for the automated, audible recitation of text arranged in a sequence of one or more words and displayed on surface (see abstract) defining an area having a height dimension and character of said text (see paragraph [0030]) along each dimension, said method comprising: a first element capable of distinguishing individual words in said sequence from an image of said surface (see paragraphs [0001], [0013], and [0031]); a second element capable of audibly reciting the words distinguished by said first element, in said sequence (see paragraph [0001]); and a third element comprising (see paragraph [0036]): an array of light-sensitive members that each convert light incident on said members to respective electromagnetic signals (see paragraph [0037]); a lens capable of focusing an image on said array (see paragraph [0039]); and a circuit capable of receiving said respective electromagnetic signals and creating an electronic image associated with said image (see paragraphs [0040], [0041], and [0042]).

Tretiakoff does not disclose specifically a fourth element capable of automatically processing said captured image so as to correct, without user interaction, for at least one of: image skew; image distortion and image blur, where said processing facilitates automated character recognition of text in a captured said image. Chakraborty teaches a method for automatic deskewing a scanned text image (abstract lines 1-2). Conner teaches a method displaying images received (abstract lines 1-5) and automatic distortion mechanism (figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the automatic image correction as disclosed by Chakraborty and Conner. Doing so would have facilitated a user of the system that has vision impairments and could not otherwise correct the image themselves. If this feature would not be added, the system would prove futile to a visually handicapped user.

As to claim 6, Tretiakoff does not specifically disclose a processor having software that instructs said third element to capture a test image of at least a portion of said surface, analyze said test image, and based on said analysis, capture a second image that differs from said test image. Tretiakoff does disclose a system that aligns and centers the image and words so that people with visual disabilities can accurately take pictures of what they desire to read (see paragraph [0015]). It would have been obvious to one skilled in the art that in order for a device to align the words or image of a surface it would need to use a portion of the image as reference, then with the test image the other images can be corrected.

As to claim 7, Tretiakoff discloses said system with the capability of correcting skewed images (see paragraph [0015]).

As to claim 8, Tretiakoff discloses the system of claim 6 where said second image is more focused than said test image (see paragraph [0032]).

As to claim 9, Tretiakoff discloses the system of claim 6 where said second image correct for a distortion in said test image resulting from capturing text from a curved surface (see paragraph [0032]).

As to claim 10, Tretiakoff discloses the system of claim 6 where said second image is a portion of said first image (see [0032]).

As to claim 16, Tretiakoff does not specifically disclose a processor having software that instructs said third element to capture a test image of at least a portion of said surface, analyze said test image, and based on said analysis, capture a second image that differs from said test image. Tretiakoff does disclose a system that aligns and centers the image and words so that people with visual disabilities can accurately take pictures of what they desire to read (see paragraph [0015]). It would have been obvious to one skilled in the art that in order for a device to align the words or image of a surface it would need to use a portion of the image as reference, then with the test image the other images can be corrected.

As to claim 17, Tretiakoff discloses said system with the capability of correcting skewed images (see paragraph [0015]).

As to claim 18, Tretiakoff discloses the system of claim 16 where said second image is more focused than said test image (see paragraph [0032]).

As to claim 19, Tretiakoff discloses the system of claim 16 where said second image correct for a distortion in said test image resulting from capturing text from a curved surface (see paragraph [0032]).

As to claim 20, Tretiakoff discloses the system of claim 6 where said second image is a portion of said first image (see [0032]).

3. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Chakraborty (US 6,529,641), Conner et al (US 5,836,664), and Wilson et al. (US PG PUB 2003/0229497).

As to claim 5, Tretiakoff discloses said element capable of capturing an image and automatically focusing on said text (see paragraph [0015]).

Tretiakoff does not disclose specifically a programmable electronic dictionary including a phonetic module that automatically recites an estimated pronunciation of a word to a user for verification. Wilson teaches a speech recognition method that includes a dictionary that recites pronunciations of words to the user based on the phonetic instructions estimated by the dictionary (paragraph [0193]-[0196]).



It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the method of providing a pronunciation dictionary as taught by Wilson. Doing so would allow a user to verify word pronunciation in a situation where a mispronunciation might occur or alternative pronunciations are available (Wilson, paragraph [0196]).

As to claim 15, Tretiakoff discloses said element capable of capturing an image and automatically focusing on said text (see paragraph [0015]).

Tretiakoff does not disclose specifically a programmable electronic dictionary including a phonetic module that automatically recites an estimated pronunciation of a word to a user for verification. Wilson teaches a speech recognition method that includes a dictionary that recites pronunciations of words to the user based on the phonetic instructions estimated by the dictionary (paragraph [0193]-[0196]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the method of providing a pronunciation dictionary as taught by Wilson. Doing so would allow a user to verify word pronunciation in a situation where a mispronunciation might occur or alternative pronunciations are available (Wilson, paragraph [0196]).

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4. Claims 21, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Cunningham (US 6,208,436).

As to claim 21, Tretiakoff discloses an electronic device comprising a processor (see paragraph [0036]), a lens in proximity to an array of light sensitive members that each convert light into a respective electrical signal (see paragraphs [0037] and [0038]), and an audio device (see paragraph [0051]), whereby said lens is capable of focusing an optical image containing text in a sequence of words on said array which converts said optical image to an electronic image containing said text (see paragraphs [0057] and [0058]); said processor is capable of receiving said electronic image and identifying individual said words in said text and routing said words in said sequence to said audio device (see paragraphs [0051] and [0053]); and said audio device is capable of audibly reciting said words in said sequence (see paragraph [0059]).

Tretiakoff does not disclose specifically said processor includes a page prompt module that is capable of identifying a page number in the header or footer of an image, and prompting the audio device to recite a warning to a user if the apparatus receives images of pages of text in nonsequential order, prior to said device reciting the words on a page determined to be in nonsequential order. Cunningham teaches optically scanning a document (abstract lines 1-3) and extraction of header information from the documents such as page number and if

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the sequence of pages is incorrect or pages are not in sequence as indicated by the page count, then an error message is outputted (column 3 lines 1-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the method of keeping track of the page number as taught by Cunningham. Doing so would allowed the system to verify for the visually impaired the page number and the sequence of the pages, with out this feature a visually impaired user would not be able to tell what page he/she is on or if it is the correct page.

As to claim 25, Tretiakoff discloses the apparatus of claim 21 including a self-contained power source (see paragraph [0052]).

As to claim 26, Tretiakoff discloses said system with the capability of correcting skewed images (see paragraph [0015]).

5. Claims 4, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Schuller (US 6,965,862) and in further view of Chakraborty (US 6,529,641) and Conner et al (US 5,836,664).

As to claims 4 and 14, Tretiakoff does not specifically disclose an audible system that can adjust one of a voice, volume, or pitch. Schuller teaches a portable reading machine that takes and image of text and converts it to speech.

This system includes audible capabilities with adjustable volume (see paragraph [0041]). It would have been obvious to have used the adjusting volume capability disclosed in Schuller in the portable text to speech conversion system in Tretiakoff. Doing so would allow for the users of such system to adjust the volume to their liking.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Schuller (US 6,965,862) and in further view of Cunningham (US 6,208,436) and Rao et al. (US PGPUB 2004/0203817).

As to claim 22, Tretiakoff does not specifically disclose the portable text to speech converter system as being a PDA. Schuller teaches that the text to speech converter system can be a PDA (see paragraph [0011]). Rao teaches a PDA that is combined with a cell phone (paragraph [0031]). It would have been obvious to have used a PDA as disclosed by Schuller and the PDA/Phone combination as disclosed by Rao for the system in Tretiakoff because the user could use the PDA for text to speech conversion and other functionalities without having to carry excess equipment. A phone/PDA combination is something that is commonly known in the art at the time the invention was made and in order for a cell phone to function it would inherently have to include an audio receiver.

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7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Schuller (US 6,965,862) and in further view of Cunningham (US 6,208,436).

As to claim 23, Tretiakoff does not specifically disclose the portable text to speech converter system as being a laptop computer. Schuller teaches that the text to speech converter system can be a computer (see paragraph [0011]). It would have been obvious to have used a computer as disclosed by Schuller for the system in Tretiakoff because the user could use the computer for text to speech conversion and other functionalities without having to carry excess equipment.

8. Claims 28, 30, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Schuller (US 6,965,862) and in further view of Struble et al. (US PGPUB 2002/0163653).

As to claim 28, Tretiakoff does not specifically disclose the text to speech system being a cell phone. Schuller teaches a text to speech system that is used in junction with a cell phone as one body (see paragraph [0050]). It is inherent that in order for such a system to function properly the cell phone system would include a body portion containing a keypad; an audio receiver, and an audio transmitter; a digital camera, and a processor capable of receiving an image containing a text sequence from said digital camera, distinguishing individual

words in said sequence, and causing said audio transmitter to recite said individual words in said sequence. It would have been obvious to have used the cell phone disclosed in Schuller for the system in Tretiakoff because this would allow further functionality of the text to speech system.

Tretiakoff does not disclose specifically disclose a storage storing a plurality of templates for identifying the layout format of text in an image captured by said digital camera. Struble teaches an improved scanning method (abstract lines 1-3) that scans using specific templates for different applications, domains, and jobs (paragraph [0011] and [0012]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the method of using Templates for different applications, domains, and jobs as taught by Struble. By using the diverse templates any type of template can be created such as telephone books, newspaper, or restaurant menus and it facilitates that problem of low recognition of documents and faster process time (Struble, paragraph [0006]).

As to claim 30, Tretiakoff discloses said system with the capability of correcting skewed images (see paragraph [0015]).

As to claim 32, Tretiakoff and Schuller do not specifically disclose a cell phone where said processor includes one or more templates for identifying the

format of text in a document corresponding to said template. It would have been obvious to one having ordinary skill in the art at the time the invention was made that in order for the optical character recognition in the cell phone system to function properly the device would have to have templates that govern its ability to recognize characters from any text.

Tretiakoff does not disclose specifically disclose a storage storing a plurality of templates for identifying the layout format of text in an image captured by said digital camera. Struble teaches an improved scanning method (abstract lines 1-3) that scans using specific templates for different applications, domains, and jobs (paragraph [0011] and [0012]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the method of using Templates for different applications, domains, and jobs as taught by Struble. By using the diverse templates any type of template can be created such as telephone books, newspaper, or restaurant menus and it facilitates that problem of low recognition of documents and faster process time (Struble, paragraph [0006]).

As to claim 33, Tretiakoff and Schuller do not specifically disclose a cell phone where one of said templates corresponds to a phone book. It would have been obvious to one having ordinary skill in the art at the time the invention was made that if the cell phone has templates for text recognition, the text or

character recognition template would also include being able to recognize phone books.

As to claim 34, Tretiakoff and Schuller do not specifically disclose a cell phone with buttons to dial phone numbers from its memory. It would have been obvious to one having ordinary skill in the art at the time the invention was made that in order for the cell phone to dial a number from its memory or from a phone book that it has taken a picture from the cell phone has to have buttons to dial with.

9. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Hiroe et al. (US 7,088,853) and in further view of Chakraborty (US 6,529,641) and Conner et al (US 5,836,664).

As to claims 2 and 12, Tretiakoff does not specifically disclose using an electronic dictionary. Hiroe teaches a text to speech method that includes a programmable electronic dictionary (see column 4 lines 4-14). It would have been obvious to have used the electronic dictionary disclosed in Hiroe for the text to speech system in Tretiakoff because this would allow the system to become more accurate for recognizing text.



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10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Hiroe et al. (US 7,088,853) and in further view of Cunningham (US 6,208,436).

As to claim 24, Tretiakoff does not specifically disclose using an electronic dictionary. Hiroe teaches a text to speech method that includes a programmable electronic dictionary (see column 4 lines 4-14). It would have been obvious to have used the electronic dictionary disclosed in Hiroe for the text to speech system in Tretiakoff because this would allow the system to become more accurate for recognizing text.

11. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Hiroe et al. (US 7,088,853) and in further view of Struble et al. (US PG PUB 2002/0163653).

As to claim 29, Tretiakoff does not specifically disclose using an electronic dictionary. Hiroe teaches a text to speech method that includes a programmable electronic dictionary (see column 4 lines 4-14). It would have been obvious to have used the electronic dictionary disclosed in Hiroe for the text to speech system in Tretiakoff because this would allow the system to become more accurate for recognizing text.

Tretiakoff does not disclose specifically disclose a storage storing a plurality of templates for identifying the layout format of text in an image captured by said digital camera. Struble teaches an improved scanning method (abstract lines 1-3) that scans using specific templates for different applications, domains, and jobs (paragraph [0011] and [0012]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tretiakoff with the method of using Templates for different applications, domains, and jobs as taught by Struble. By using the diverse templates any type of template can be created such as telephone books, newspaper, or restaurant menus and it facilitates that problem of low recognition of documents and faster process time (Struble, paragraph [0006]).

12. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Goldberg (US 6,205,261) and in further view of Chakraborty (US 6,529,641) and Conner et al (US 5,836,664).

As to claims 3 and 13, Tretiakoff does not specifically disclose using spell check in the text to speech system. Goldberg discloses a text recognizing system that uses spell check (see column 2 lines 54-60; column 3 lines 15-25; column 9 lines 35-55). It would have been obvious to have used spell check as

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disclosed in Goldberg for the system in Tretiakoff because this would allow for the system to correct words misspelled so that the system can accurately identify text.

13. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tretiakoff et al. (US PGPub 2003/0134256) in view of Schuller (US 6,965,862) as applied to claims 4, 14, 22, 23, 28, 30 above, and in further view of Baum (US 6,256,610) and in further view of Struble et al. (US PGPUB 2002/0163653).

As to claim 31, Tretiakoff and Schuller do not specifically disclose capability for reading page numbers of text documents. Baum teaches a page prompt module that is capable of identifying a page number in the header or footer of an image, and prompting the audio device to recite a warning to a user if the apparatus receives images of pages of text in non-sequential order (see column 4 lines 32-47).

***Conclusion***

A note has been made to notify the appropriate parties that the examiner has moved from Art Unit 2609 to 2626.

Any inquiry concerning this communication should be directed to Josiah Hernandez whose telephone number is 571-270-1646. The examiner can normally be reached from 7:30 pm to 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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JH



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